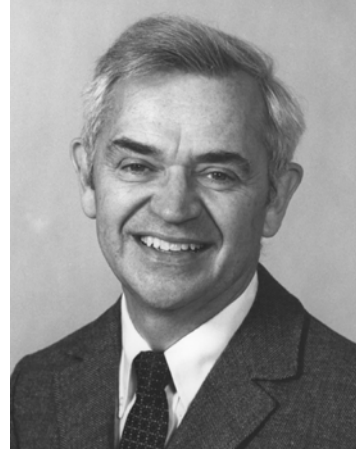


## Daniel Guggenheim Medal

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### MEDALIST FOR 1999

*For major fundamental theoretical and experimental contributions to the field of internal aerodynamics, combustion and propulsion especially with respect to gas turbines and rockets, and educating generations of leaders in industry and academia.*



**FRANK MARBLE**

Frank Marble was born in Cleveland, Ohio and received Bachelor's and Master's degrees from Case Western University. He served as head of the Heat Transfer and Cooling Section at the Lewis Flight Propulsion Center of the NACA and later as Chief of the Compressor Branch. He also instructed in fluid mechanics and gas turbines at the Case School of Applied Science during that time. In 1947 he received a PhD in aeronautics and mathematics from Cal Tech and taught fluid mechanics and gas turbines, as an instructor, assistant professor and associate professor at that Institution.

He was chief of combustion research at the Jet Propulsion Lab from 1967 to 1949 and was named the Hayman Professor of Mechanical Engineering and Jet Propulsion at Cal Tech in 1980. Dr. Marble received the Combustion and Propulsion Award from AIAA.

He served as a visiting professor to the Chinese Academy of Science (1982), as well as MIT (1980-1981) and Cornell University (1956). In addition, he served as a member of various boards and committees for the National Research Council and the National Academy of Sciences.

Professor Marble was responsible for training several generations of propulsion and combustion scientists over his career. He and his students published numerous articles on topics such as flame stabilization, compressor aerodynamics, turbine heat transfer and cooling as well as rocket propulsion. As a result of his keen understanding of fluid mechanics and combustion, and his ability to communicate this knowledge, he leaves a legacy of trained researchers and professors to further develop propulsion devices.

Professor Marble is a member of the National Academy of Sciences, National Academy of Engineering, a Fellow of AIAA, and the Combustion Institute.